1998 Outcomes of Former Arts and Sciences Students

BC College and Institute Student Outcomes Report

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Ministry of Advanced Education, Training and Technology

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BC College and Institute Student Outcomes Report

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Executive Summary

Introduction

The following report—written on behalf of the BC Outcomes Working Group—details the educational outcomes and experiences of former students who were enrolled in academic arts and sciences programs at British Columbia colleges and university colleges in the 1996–1997 academic year. The data for this report were drawn from the 1998 BC College and Institute Student Outcomes Survey. In total, 5,071 former arts and sciences students were interviewed in the spring of 1998, approximately 9 to 12 months after they completed all, or most, of their educational programs.

Much of the analysis conducted for this report distinguished lower level (1st and 2nd year) arts and sciences programs from upper level (3rd and 4th year) arts and sciences programs. The analysis was organized this way because lower level respondents and upper level respondents had different outcomes. For example, a look at employment outcomes shows that a majority of all former students were employed at the time they were surveyed; however, it is important to note that most respondents from lower level programs were also continuing their studies. As a result, their occupations do not necessarily reflect their career choices. If the outcomes of upper level students are any indication, once individuals from lower level programs complete further studies their employment outcomes are likely to improve.

Findings

Most of the former arts and sciences students interviewed were 25 years of age or younger (66%), and most were female (61%). Virtually all respondents (95%) reported having completed high school, and 10 percent had obtained a post-secondary credential prior to enrolling.

Approximately 29 percent of all respondents enrolled in arts and sciences programs to complete a credential; 56 percent of respondents from upper level programs wanted a credential. About 51 percent of respondents from lower level programs enrolled to prepare to transfer or to qualify for other programs. A small percentage of respondents had goals related to employment: some were interested in learning new job skills (8%) or improving their existing job skills (3%), while others wanted to decide on a career or to make a career change (23%). It appears that employment was less important than academic attainment for former arts and sciences students.

A majority (78%) of respondents from upper level programs reported that they had completed the requirements for a credential, while 76 percent of respondents from lower level programs reported they had gone on to further studies. These educational outcomes of former students from lower and upper level programs were consistent with the goals each group of students had for enrolling.

It is clear that completing higher education has a positive effect on employment—after respondents from upper level programs completed their education they were more likely to work in highly skilled occupations. Approximately 64 percent of employed upper level respondents who were no longer studying were working in technical, paraprofessional, professional, or managerial positions.

Conclusion

The analysis for this report—the first provincial-level report to focus on the educational outcomes of former students from academic arts and sciences programs—is intended to support decision making by facilitating a greater understanding of these students. In particular, the comparison of respondents from lower level programs with respondents from upper level programs demonstrates the differences in their educational goals, outcomes, and experiences.

Introduction

Special Report on Former Students from Arts and Sciences Programs

Report Objectives

The BC Outcomes Working Group requested this special report to gain a better understanding of the educational outcomes and experiences of those former students who were enrolled in academic arts and sciences programs at British Columbia colleges and university colleges in the 1996–1997 academic year.

The report was written primarily for college and university college administrators, deans, and faculty, to provide information that will assist them with program planning and decision making. The report details the demographic characteristics of those who responded to the survey and reviews respondents' evaluations of their college experiences, their satisfaction levels, and their further education and employment outcomes.

1998 BC College and Institute Student Outcomes Survey

The data for this report were drawn from the 1998 BC College and Institute Student Outcomes Survey.[1] A total of 5,071 former students from academic arts and sciences programs were interviewed in the spring of 1998, approximately 9 to 12 months after having completed all, or a significant portion (at least 24 credits), of their educational program. This group constituted close to 30 percent of the total number of 1998 survey respondents. Of these arts and sciences students, 93 percent were enrolled in first and second year courses, while approximately 7 percent were enrolled in third or fourth year courses.

Background on BC's Colleges and University Colleges

Growth of BC Colleges

The demand for post-secondary education increased throughout Canada following the end of the Second World War. Although British Columbia was slow to respond to this increase in demand (relying on the University of British Columbia to deliver higher education in the province until the early 1960s), by the mid-1960s and into the early 1980s there was rapid creation and growth of colleges and institutes in the province.

The BC college movement—designed in part to decentralize educational resources and provide equality of access throughout the province—included university equivalency (UT) courses, career and technical training, and commu-

[1] See Appendix A for a description of the Student Outcomes Survey Project.

nity and remedial education. Vocational training was incorporated into the system in the 1970s. Since the creation of the college system, it has been common for students to complete the first and second years of a university degree program at BC colleges and then transfer to BC universities for their final two years and degrees in their chosen fields. In the past five years, according to the *British Columbia Council on Admissions and Transfer Annual Report, 1999–2000*, 40 percent of students entering the three largest universities transferred from a college or university college.

Creation of BC University Colleges

In the late 1980s and early 1990s, the creation of five university colleges in BC further increased students' access to degree-granting programs throughout the province. Malaspina University-College, Okanagan University College, and the University College of the Cariboo all became university colleges in 1989, and all have a broad mandate to deliver programs leading to a Bachelor of Arts or a Bachelor of Science that are applied or academic. Similarly, the University College of the Fraser Valley, created in 1991, has a broad mandate to deliver programs leading to Bachelor of Arts or Bachelor of Science, either applied or academic. Kwantlen University College, which emerged in 1995, has a mandate that is restricted to applied degree programs (for example, nursing, business administration, applied design, information technology).

Funding for Academic Arts and Sciences

In 1998/99, Colleges and University Colleges in British Columbia received approximately $405 million in funding for all courses and programs, and of that amount, one-quarter (approximately $103 million) was allocated to academic arts and sciences courses and programs.

Applied Programs and Arts and Sciences Programs

It is important to emphasize that this report investigates outcomes for only those former students who were enrolled in academic arts and sciences programs. The analysis does not include a review of applied programs such as business or business administration, social work, child and youth care, nursing, education, fine arts or graphic design, computer information systems, or information technology.

Lower Level Programs and Upper Level Programs

In addition to the differentiation that exists between applied and academic arts and sciences programs, the college and institute system also distinguishes lower level courses and programs from upper level courses and programs. Lower level refers to first and second year university credit courses, while upper level refers to third and fourth year university credit courses. Upper level courses are offered primarily at university colleges, although upper level courses and baccalaureate programs are offered at the Open Learning Agency and the British Columbia Institute of Technology. (BCIT's degree programs are applied.)

In general, academic arts and sciences fall into the following four categories:

1. *Lower level academic arts* (e.g., Political Science, Sociology, Psychology, English, Anthropology) which include associate arts degree programs as well as first and second year arts transfer courses
2. *Lower level academic sciences* (e.g., Astronomy, Biology, Chemistry, Mathematics, Physics) which include associate science degree programs as well as first and second year sciences transfer courses
3. *Upper level Bachelor of Arts degree programs* (e.g., Sociology, Psychology, English, History)
4. *Upper level Bachelor of Science degree programs* (e.g., Biology, Chemistry, Physics, Ecology)

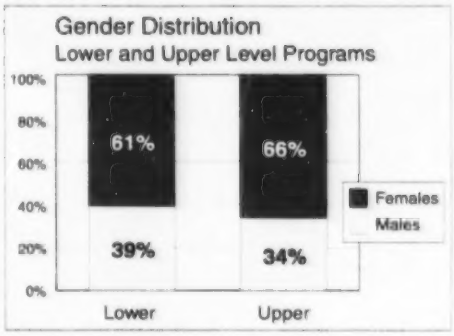
As mentioned earlier, most of the former academic arts and sciences students surveyed were from lower level programs (n=4,704), although former students from upper level programs were adequately represented (n=367). Since we suspected there were major differences between the students who had completed two years of college and those who had left after four years, this report presents results for the two groups separately. As expected, the key findings from the analysis revealed notable differences in student characteristics and educational outcomes by level of study. In particular, characterizing respondents from lower level programs as *former students* is not entirely accurate: in comparison to respondents from upper level programs, a greater percentage—in fact a large majority—of respondents from lower level programs either returned to their college or university college or transferred to a university to complete their studies.

Key Findings

Who are former academic arts and sciences students?

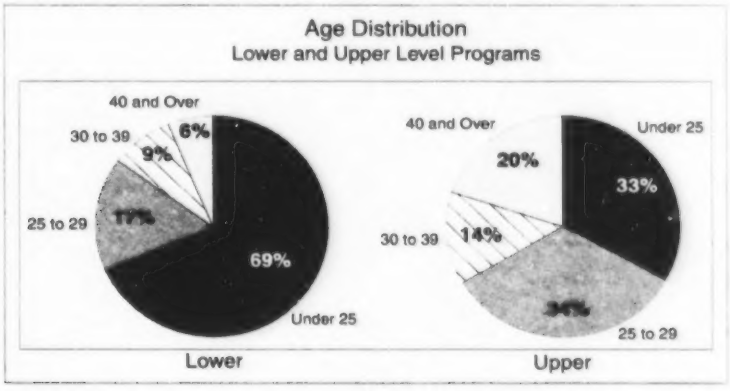
The majority of former arts and sciences students are female.

A majority of the former students from 1996–1997 academic arts and sciences programs were female (61%). Females comprised a slightly greater percentage of former students from upper level programs.



Most former arts and sciences students are under 25.

Most respondents were 25 years of age or younger (66%). Approximately 18 percent were between 25 and 29 years of age, and 16 percent were 30 years or older. A much higher percentage of respondents from lower level programs were under 25.



Minorities are not strongly represented among respondents.

Very few—3 percent (n=166)—of respondents reported being Aboriginal. This is slightly lower than the percentage of the provincial former student population that was identified as Aboriginal in the 1998 BC Student Outcomes Survey (4%). The number of respondents who reported having a long-term mental or physical health condition that limits the kinds of activities they can perform was also small (4%). Close to 7 percent of respondents learned English later in life—either as teenagers or after reaching adulthood.

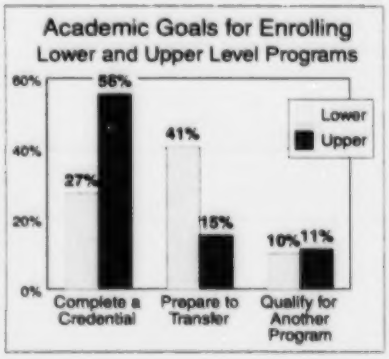
Almost all former arts and sciences students are high school graduates.

Almost all respondents (95%) reported that they had completed high school prior to enrolling. Twenty-eight percent had some previous post-secondary education—10 percent had obtained a previous post-secondary credential. More former students from upper level programs (17%) had a previous credential.

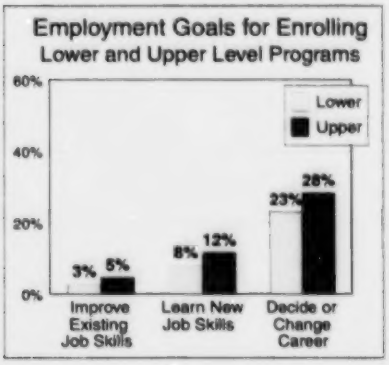
Why did former students enroll in arts and sciences programs?

Former students from upper level programs wanted credentials.

Numerous reasons for enrolling were reported, and in some instances respondents listed more than one reason. Many enrolled to complete a credential (29%) or to prepare to transfer to another institution (39%), while others enrolled to qualify for a program in another field of study (10%). Separating respondents' reasons by program level showed that many more former students from upper level programs than from lower wanted to complete a credential.



A minority of former arts and sciences students enrolled for job-related reasons.



In comparison, a smaller percentage of respondents had goals related to employment. Some were interested in learning new job skills (8%) or improving their existing job skills (3%), while others wanted to decide on a career or to make a career change (23%).

Finally, a few respondents reported that they enrolled to improve basic skills (2%), and some enrolled for personal interest (11%).

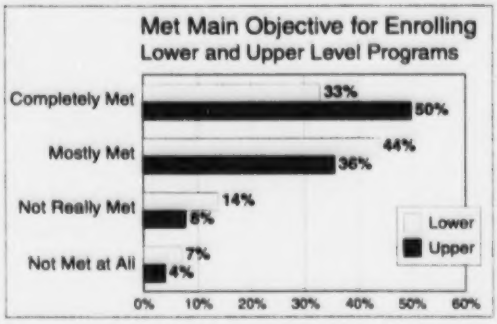
The above findings show clearly that former academic arts and sciences students' educational pursuits were focused foremost on academic attainment and only secondarily on employment.

Did former students from arts and sciences achieve their main objectives?

The majority of former students from arts and sciences programs achieved their goals.

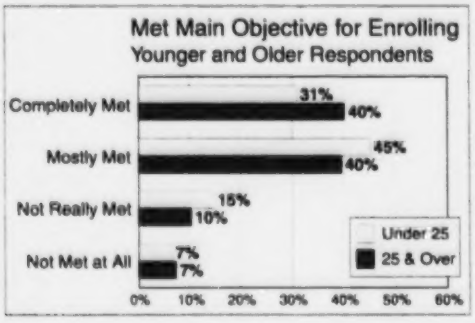
Nearly 80 percent of respondents felt they "completely" or "mostly" achieved their main enrollment objective. Very few, just 7 percent, felt they had not met their main objective at all.

Former students from upper level programs more often reported that they "completely" met their objective for enrolling than did respondents from lower level programs, who were more inclined to say they "mostly" met their main objective.



Older arts and sciences students are more likely to feel they met their goals.

Comparing older respondents with younger shows a similar response pattern. A larger percentage of older students stated they achieved the main objective they had for enrolling. Close to half (49%) of former students over forty reported they had "completely" met their primary enrollment goal. In comparison, only 31 percent of students under 25 said they "completely" met their main objective for enrolling.



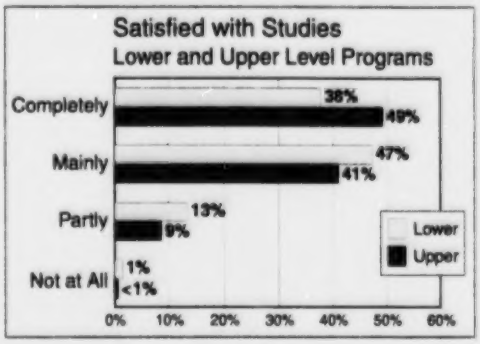
Former students were more likely to meet academic goals than job-related goals.

Of those respondents who cited academic reasons for enrolling, 80 percent from lower level programs and 91 percent from upper level programs "mostly" or "completely" met their main objective. Of those who said their reasons for enrolling were job-related, 69 percent overall said they "mostly" or "completely" met their main objective.

Are former arts and sciences students satisfied with their studies?

Former arts and sciences students are generally satisfied with their education.

When interviewed, approximately 86 percent of former arts and sciences students said they were either "completely" or "mainly" satisfied with their studies; a larger percentage were "mainly" satisfied. Respondents from upper level programs tended to be more satisfied; in fact, close to half (49%) said they were "completely" satisfied—as opposed to 38 percent of former students from lower level programs.



What are the academic achievements of former arts and sciences students?

Former arts and sciences students had a GPA of 2.82.

Overall, former students achieved a mean GPA of 2.82 for their arts and sciences programs. Female respondents earned slightly higher GPAs (2.87) than male respondents (2.75).

Older respondents have the highest GPAs.

Age appears to be a greater factor than gender in how students performed academically. A review of respondents' grade point averages revealed that the mean GPA for arts and sciences respondents under 25 was 2.77. In comparison, the mean GPA for those who were over forty was 3.17.

Former students from upper level programs perform better academically.

Looking at GPA findings by program level shows that former students from lower level programs had a lower mean GPA than students from upper level programs (2.81 and 2.98 respectively).

GPA by Age
Lower Level and Upper Level Programs

Mean GPAs of different age groups

	<25	25-29	30-39	40+
Lower	2.76	2.80	3.00	3.13
Upper	2.92	2.81	3.13	3.33

Although age is an important factor in academic performance, students in upper level programs have higher mean GPAs, regardless of age.

How many former students completed the requirements for a credential?

More former students from upper level than from lower level programs got a credential.

When former arts and sciences students were asked if they had completed the requirements for a credential, such as a degree, diploma, or certificate, approximately 26 percent said "yes." Although this percentage may seem low, there are pronounced differences between respondents from upper level programs and those from lower level programs. While only 22 percent of former lower level students achieved a credential, 78 percent of those from upper level programs completed the requirements for a credential.

These results parallel respondents' objectives for enrolling. Only 27 percent of former students from lower level programs said that completing a credential was their goal; however, 51 percent said they enrolled to transfer to another institution or prepare for another program. More former students from upper level programs (56%) cited getting a credential as an objective for enrolling.

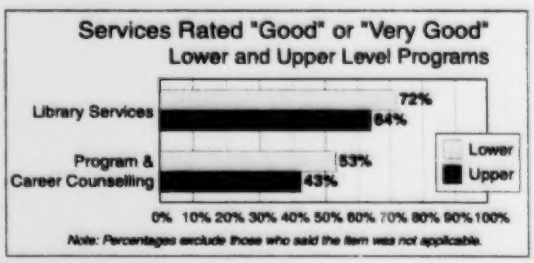
Of those respondents who cited achieving a credential as a reason for enrolling, 30 percent from lower level programs said they "completely" met their main objective, as did 53 percent from upper level programs.

How do former arts and sciences students rate their experiences at their colleges or university colleges?

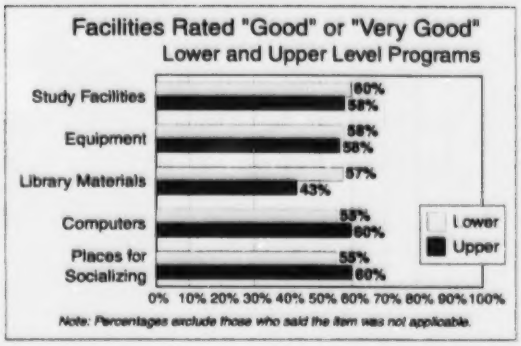
Overall, former arts and sciences students reported that institutional services, facilities, and teaching were good.

Former arts and sciences students were asked to rate certain aspects of their educational program. The survey included questions on the instruction they received, some services that were provided, and a number of facilities they may have used. Respondents rated *Quality of Teaching*, *Instructor Availability*, and *Program Organization* highest. In all three cases, approximately 80 percent of students rated their experience "good" or "very good." They were less positive, however, about their experiences with *Places for Socializing*, *Program and Career Counseling*, and *Practical Experience*.

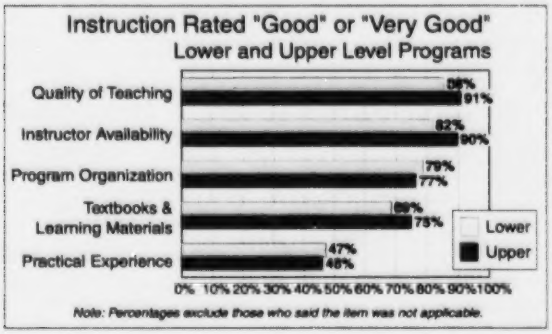
In general, former students from lower level programs were more positive about services and facilities, while respondents from upper level programs were somewhat more positive about the instruction they received.



Program and Career Counselling and *Library Materials* were rated "good" or "very good" by only 43 percent of those respondents from upper level programs who said the item was applicable.



Former students from both lower and upper level programs rated items to do with instruction very highly.



"I liked the small class size and the availability of instructors."

All the former arts and sciences students surveyed were asked what they liked about their program and what could be improved. Many people said the same things: they liked the smaller class sizes and the fact that their instructors were readily available and helpful.

"More variety of courses and more courses in the evenings and summer times."

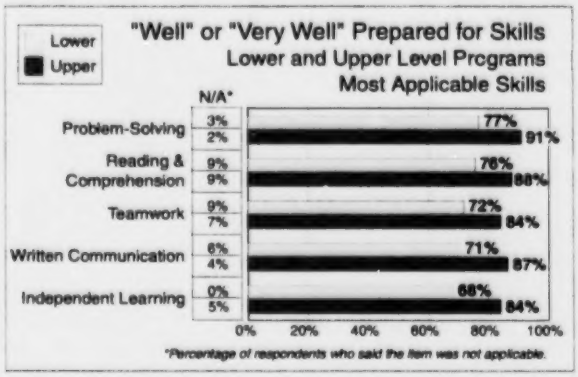
Typically, respondents noted that the program should offer more choices and more courses—that is, former students would have liked greater variety in course offerings and more flexibility in scheduling courses.

Additional comments were almost all positive. A great number of respondents noted that their studies were a good learning experience and an excellent preparation for university. Many used phrases such as "good bridge," "great stepping stone," "good step between,"—meaning a good transition from high school to university—to describe their arts and sciences programs.

Do arts and sciences programs help students develop skills?

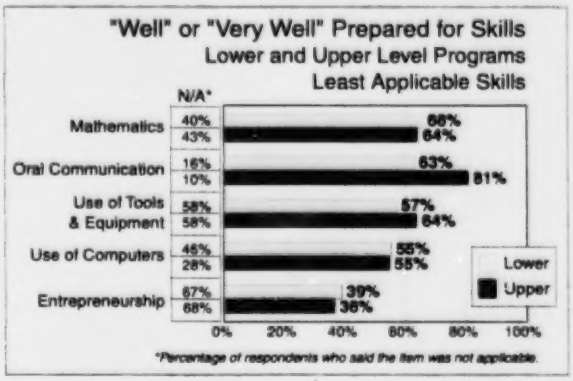
Overall, former arts and sciences students feel their program helped them develop skills.

Former arts and sciences students were generally positive about how well their program helped them develop skills. In particular, respondents felt they were especially well prepared to think critically and solve problems, read and comprehend, write clearly, and work effectively with others. Former students from upper level programs gave higher ratings to almost every item.



Former students feel certain skills are not relevant to their arts and sciences programs.

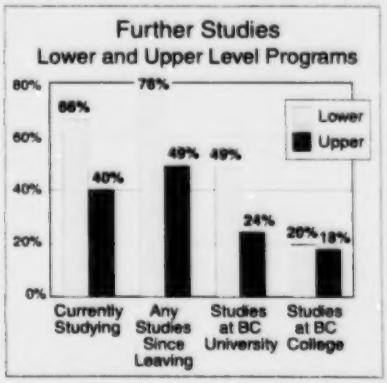
There were some skills listed in the survey that were not applicable to large percentages of former arts and sciences students; these items were also given the lowest overall ratings. In particular, former students did not feel that entrepreneurship was applicable to their studies (68% not applicable). Even those who judged it applicable were not inclined to say their programs helped them develop entreprenuerial skills. As well, respondents did not feel that using tools and equipment (58% not applicable) or using computers (45% not applicable) were relevant to their studies.



How many former arts and sciences students take further studies?

A majority of former arts and sciences students are involved in post-secondary studies.

At the time of the interview, 64 percent of former arts and sciences students reported that they were studying. In total, 74 percent of respondents took further education at some point after their arts and sciences



programs. Students from lower level programs were more likely to be studying, and the majority went on to university studies rather than other college programs.

Former students from lower level programs are almost twice as likely as those from upper levels to continue their education.

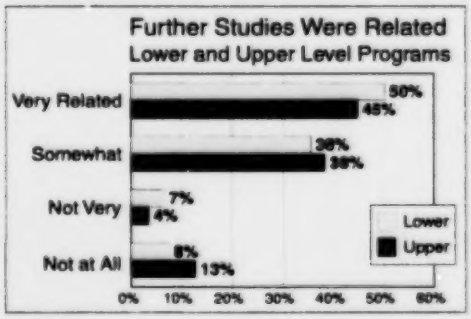
The educational outcomes of former students from lower and upper level programs a year after leaving arts and sciences studies were consistent with the goals each group of students had for enrolling. Completing the requirements for a credential—thereby presumably completing their education—was most important for 56 percent of respondents from upper level programs, while 27 percent indicated they wanted to prepare to transfer or qualify for another program.

Preparing to transfer or qualify for another program were important objectives for 51 percent of former students from lower level programs—only 27 percent of these students said that obtaining a credential from their arts and sciences program was their objective for enrolling.

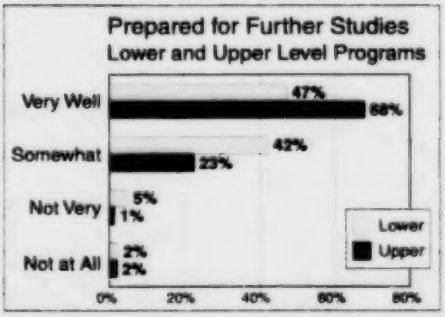
Are former arts and sciences students prepared for further studies?

A majority of those who go on say their further studies are related to their arts and sciences program.

Of those who went on to further education, 86 percent said their studies were "somewhat" or "very related" to their former arts and sciences programs. Students from lower level programs were slightly more likely to consider their studies related.



Most former arts and sciences students say that their previous education prepared them for further studies.



Close to 90 percent of former students who went on to further studies said they were "well" or "very well" prepared by their arts and sciences programs.

Do former students who change institutions experience transfer problems?

Most former arts and sciences students who go on to further studies transfer course credits.

Approximately 82 percent of respondents who went on to further studies transferred credits. Former students from lower level programs were far more likely to try to transfer credits (84%) than former students from upper level programs (34% tried to transfer credits).

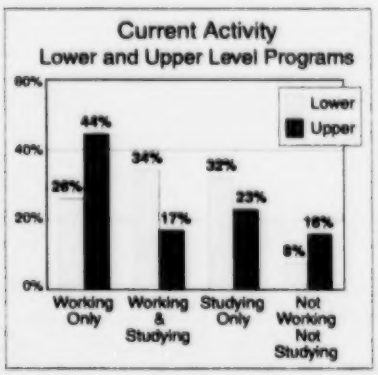
A small percentage of former arts and sciences students report having transfer problems.

Of the former arts and sciences students who tried to transfer credits, 15 percent said they had transfer problems. Respondents from lower level programs experienced virtually all of these problems, and of these students, approximately 34 percent reported that the problems they encountered were "serious" or "very serious." There were some former students (about 10 percent of those who transferred credits) who tried to transfer their original credential as one block of credits toward their new program; of these respondents, only 33 percent said they received all the credits they expected.

How do former arts and sciences students participate in the labour force?

The majority of former arts and sciences students are either employed or looking for work.

At the time of the survey, 78 percent of former arts and sciences students were in the labour force, that is, they were either employed (60%) or actively looking for work (17%). These percentages were virtually the same for both lower and upper level students.

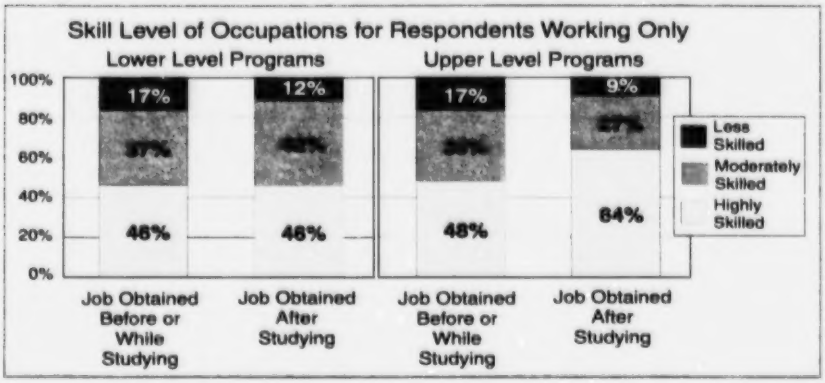


Of those respondents who were not participating in the labour force—that is, former students who were not working or looking for work—73 percent were studying full-time. A larger percentage of former students from lower level programs than from upper were either "working and studying," or "studying only." Conversely, more respondents from upper level programs (44%) were "working only" compared to respondents from lower level programs.

Employed former students show an increase in the skill level of their occupations.

Former students who were employed at the time of the survey were asked if they had the same job as they had before or while they were taking their arts and sciences studies. Approximately 47 percent reported having the same job, while over half (53%) reported that they got their job after their studies. The occupa-

tions of those who had the same job were compared with the occupations of former students who had a different job after studying. For respondents who were "working only," the comparison shows some movement into positions that require higher levels of skill, particularly for former students from upper level programs.



Former arts and sciences students tend to work full-time whether they are studying or not.

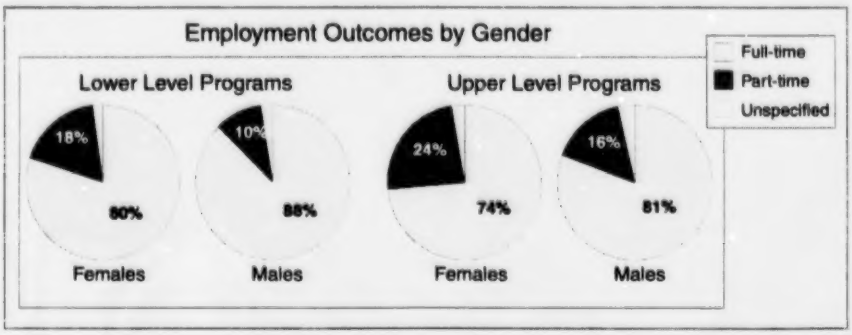
Among former students who were "working only," 82 percent were working full-time rather than part-time. Of students who were "working and studying," 54 percent were working part-time. The middle or median gross monthly wage for full-time workers was $2,000, and $693 for part-time employees.

Current Activity
Full-time and Part-time Employment

	Lower Level Programs			Upper Level Programs		
	Working Only	Working & Studying	Median Monthly Wage	Working Only	Working & Studying	Median Monthly Wage
Full-time	83%	44%	$1,958	76%	53%	$2,198
Part-time	15%	54%	$667	21%	45%	$866

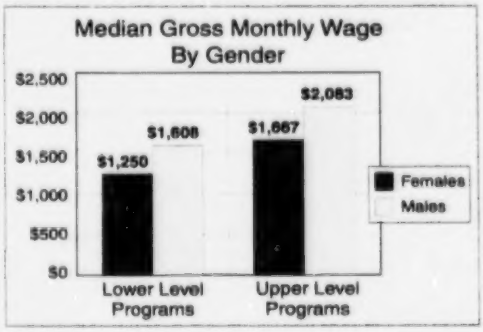
Female former arts and sciences students are less likely to have full-time jobs.

Of those who were "working only," 79 percent of women were working full-time, compared to 87 percent of men.



Former students from upper level programs earn higher wages.

The median gross monthly wage for males was $1,656—the corresponding wage for females was $1,299. Looking at wages for former students from lower and upper level arts and sciences programs, it is evident that males earn more than females. However, both male and female former students from upper level programs earn higher wages than their counterparts from lower level programs.

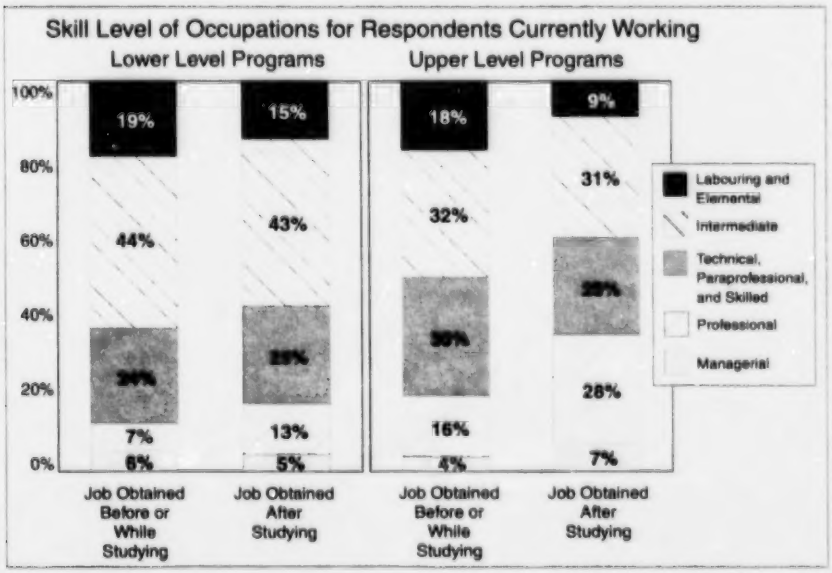


What occupations do former arts and sciences students hold?

The skill level of occupations obtained after students leave their programs is higher than that of occupations obtained during study.

Skill level is defined by the amount and the type of education and training that is required to enter and perform the duties of an occupation.[2] There are four main levels, ranging from "labouring and elemental" occupations, which require minimal education, to "professional" occupations, which require university degrees. A fifth category of occupations, "managerial," is included, although it does not really represent a skill level because factors other than education often determine employment.

Of those employed at the time of the survey, 42 percent were employed in intermediate level positions; this level does not normally require any post-second-



[2] See Appendix B for information on the National Occupation Classification system.

ary education. Another 41 percent were working in technical, paraprofessional, professional, or managerial positions, which do require some post-secondary education.

All the employed respondents were asked if they held the same job as they had "before or while" they were studying. The skill levels of jobs held before or during arts and sciences studies were compared with the skill levels of positions held after studying. The analysis revealed a slight upward shift toward more highly skilled occupations—this shift is most pronounced for upper level students.

Former students from lower level programs obtain "Sales and Service" positions more often than any other occupation type.

As distinct from skill *level*, occupation *type* refers to the main duties and functions carried out by workers. Nearly half (49%) of former arts and sciences students from lower level programs who had their job while studying worked in "Sales and Service" positions, with "Business, Finance and Administration" positions being the next most common at 16 percent. For lower level respondents who obtained their job after leaving their program, the highest percentage were still working at "Sales and Service" positions (39%), but more people than before held positions in "Business, Finance, and Administration" (18%) and "Social Sciences, Education, Government, and Religion" (15% compared to 7%).

Former students from upper level programs, on the other hand, were more likely to have jobs which required more skills and experience after leaving their arts and sciences program. "Sales and Services" positions were still very common for upper level students while studying (38%), but after leaving their program, the largest percentage (26%) obtained "Social Sciences, Education, Government, and Religion" positions.

The occupations obtained by lower level respondents *after* their programs are similar to those obtained by upper level respondents *before* they leave.

The occupations held by lower level respondents after they left their programs showed a remarkable similarity to occupations obtained by respondents from upper level programs before or while they were studying: "Sales and Service," 39 and 38 percent respectively; "Business, Finance, and Administration," 18 and 17 percent; "Natural and Applied Sciences," 6 and 6 percent; and so on.[3]

The jobs held by former arts and sciences students 9 to 12 months after leaving their program may not reflect their eventual career outcomes. Lower level students, in particular, often continue with their education after leaving their initial program, so their occupational choices may be a result of financial need or convenience rather than career objectives.

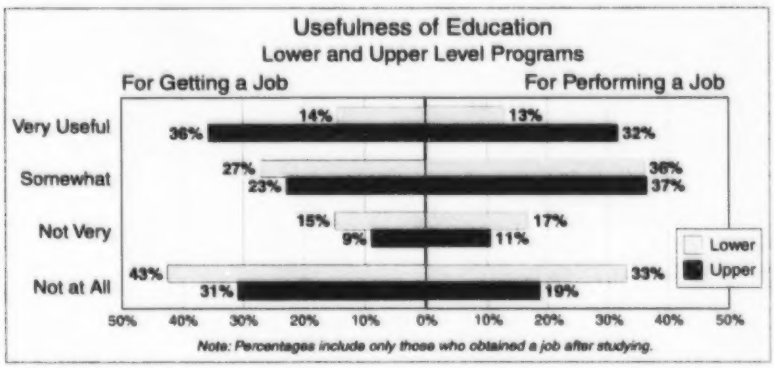
[3] See Appendix C for listings of Occupation Types held by respondents before or while studying and after studying.

Do arts and sciences programs help former students obtain and perform jobs?

Former students from upper level programs are more likely than students from lower level programs to say their education was useful for performing and getting jobs.

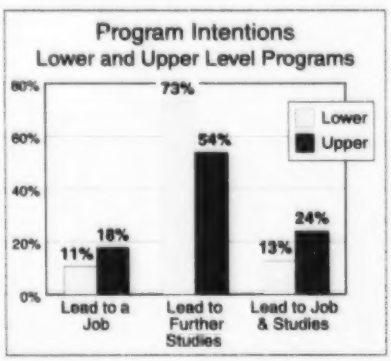
While obtaining job skills was not a major objective for most former arts and sciences students, 59 percent of respondents from upper level programs who obtained their jobs after studying felt their education was "very" or "somewhat" useful for getting their main jobs. Sixty-eight percent of those same respondents said their education was "very" or "somewhat" useful for performing their jobs.

Only 49 percent of former students from lower level programs who obtained their job after studying felt their arts and sciences education was "very" or "somewhat" useful for performing their jobs—41 percent said the same about getting their jobs. Former lower level students were more likely than those from upper level programs to say that their training was "not at all" useful for either performing or getting jobs.



A minority of former arts and sciences students thought that their education was related to their job or that it had been intended to lead to a job.

Upper level respondents employed at the time of the survey were more likely than respondents from lower level programs to say that their education had been intended to lead to a job; however, a majority of former students from both lower and upper level programs (72%) believed that preparation for further studies had been the primary intention.



Of those former students who thought their education was intended to lead to a job, those from upper level programs were more likely than those from lower level programs to say that their job was "somewhat" or "very related" to the training they received: 56 percent and 44 percent respectively.

Conclusion

Report Purpose

This special report was written to provide insight into the experiences of former students of academic arts and sciences programs at British Columbia's colleges and university colleges. This is the first time that a provincial-level report focussing on the educational outcomes of this group of students has been produced for the BC Outcomes Working Group.

The analysis conducted for this report is intended to support decision making by facilitating understanding of former students from lower and upper level arts and sciences programs in BC colleges and university colleges.

Summary of Results

The former arts and sciences students surveyed were, for the most part, young and still in the process of working toward their educational goals. Although the majority were 25 years of age or younger, a sizable percentage were over 25 years old (34%). When asked why they enrolled in their chosen programs, most former students cited academic rather than job-related reasons. The largest number enrolled to complete a credential or to prepare to transfer to another institution.

Former students from upper level programs were more satisfied with their studies and were far more likely to achieve a credential than those from lower level programs (22% to 78% respectively). Overall, 78 percent of former students stated they "completely" or "mostly" achieved their main objective for enrolling; a greater percentage of older respondents reported having completely met their goal for enrolling than did younger respondents. In addition, older respondents had higher grade point averages. Age is associated positively with academic achievement and educational outcomes.

Former students were generally positive about the skills they developed through their programs of study, although using tools and equipment and entrepreneurial skills were considered "not applicable" by a majority of respondents; many also noted that mathematics and using computers were not applicable. Furthermore, none of those skills received high ratings from the respondents who said they were applicable. It seems that most former students agree that these skills—which are typically associated with applied studies—were not particularly relevant to their academic arts and sciences programs.

Conclusion, Continued

For the most part, former students rated their institution's services, facilities, and teaching quite highly. Upper level respondents, however, did not give program and career counseling or library materials a very high rating and both lower and upper level respondents gave practical experience a low rating. Given the academic focus of the programs under study, it is not surprising that the amount of practical experience obtained was rated "poor" or considered not applicable by many.

At the time of the interview, a majority of respondents reported they were studying, and of those who went on to further education, 90% reported they felt "well" or "very well" prepared by their former arts and sciences program. Most also said their continuing studies were related to their previous education.

Many former arts and science students were participating in the labour force at the time they were interviewed—60 percent of respondents were employed. A greater percentage of former students from lower level programs were working and studying than were working only. In comparison, a larger percentage of former students from upper level studies were working only, rather than working and studying.

Comparing occupation skill levels of those who were working and not studying showed that, after their studies, former students from upper level programs were more likely to have obtained positions that require a high degree of skill (64% employed in higher skilled occupations) than former students from lower level programs (46% employed in higher skilled occupations).

Although a majority of former students were employed at the time they were surveyed, the analysis by level of study revealed that most respondents from lower level programs were continuing their studies. Since they were both working and studying, it is likely their occupations do not reflect their career choices. Once they have completed their education, their employment outcomes may be quite different. The report analysis showed that completing higher education has a positive effect on employment. Many former students from upper level programs obtained higher skilled employment after completing their arts and sciences programs.

Appendix A

About the Student Outcomes Survey Project

The BC College and Institute Student Outcomes Survey Project collects and disseminates information about former students' post-secondary experiences and their subsequent labour market and further education participation. The Student Outcomes Survey is administered annually to a number of former students of public colleges and institutes in British Columbia. The findings serve to guide educational choices for future students, to demonstrate the success of the college and institute system in achieving its mandate, and to provide a solid basis for educational planning decisions.

This report is based on data from the Student Outcomes Survey conducted in the spring of 1998. Former students were contacted by telephone 9 to 12 months after completing all, or a significant portion, of their educational program. Input was received from 18,113 former students from 21 public colleges and institutes; this represents 59 percent of the targeted 30,455 former students.

Former students from the following 21 public colleges and institutes participated in the 1998 survey:

British Columbia Institute of Technology (BCIT)
Camosun College (CAM)
Capilano College (CAP)
College of New Caledonia (CNC)
College of the Rockies (COTR)
Douglas College (DGL)
Emily Carr Institute of Art and Design (ECIAD)
Justice Institute of BC (JINST)
Kwantlen University College (KWN)
Langara College (LANG)
Malaspina University-College (MAL)
Nicola Valley Institute of Technology (NVIT)
North Island College (NIC)
Northern Lights College (NLC)
Northwest Community College (NWCC)
Okanagan University College (OKN)
Open Learning Agency (OLA)
Selkirk College (SEL)
University College of the Cariboo (CAR)
University College of the Fraser Valley (FVAL)
Vancouver Community College (VCC)

The project is conducted with funding from the Ministry of Advanced Education, Training and Technology (MAETT) and Human Resources Development Canada under the Canada/British Columbia Strategic Initiative Program and from British Columbia's public colleges and institutes. The British Columbia Outcomes Working Group (OWG) oversees all aspects of the project, from data collection through to the reporting of survey results. The OWG is a decade-old partnership among MAETT, colleges and institutes, and system bodies, such as the Advanced Education Council of British Columbia and the BC Council on Admissions and Transfer.

Appendix B

The National Occupation Classification (NOC)

From the document, *National Occupation Classification Occupational Descriptions*, published by Human Resources Development Canada.

The National Occupation Classification (NOC) is a systematic taxonomy of occupations in the Canadian labour market. It is based on extensive occupational research, analysis, and consultation conducted across the country. The NOC is intended for use in compiling, analyzing, and communicating information about occupations. There are approximately 25,000 occupational titles included in the NOC.

The two major attributes of jobs which were used as classification criteria in developing the NOC were *skill level* and *skill type*.

1. **Skill Level** is defined generally as the amount and type of education and training required to enter and perform the duties of an occupation. Four skill level categories are identified in the NOC; the criteria for each level are as follows:

Skill Level A Professional Occupations

- University degree (bachelor's, master's, or postgraduate)

Skill Level B Technical, Paraprofessional, and Skilled Occupations

- Two to three years of post-secondary education at a community college, institute of technology, or CEGEP *or*
- Two to four years of apprenticeship training *or*
- Three to four years of secondary school and more than two years of on-the-job training, training courses, or specific work experience
- Occupations with supervisory responsibilities are assigned to skill level B
- Occupations with significant health and safety responsibilities (e.g., fire fighters, police officers, and registered nursing assistants) are assigned to skill level B

Skill Level C Intermediate Occupations

- One to four years of secondary school education
- Up to two years of on-the-job training, training courses, or specific work experience

Skill Level D Labouring and Elemental Occupations

- Up to two years of secondary school and short work demonstration or on-the-job training

Management occupations are not assigned to a skill level category because factors other than education and training (e.g., previous experience, capital) are often more significant determinants for employment.

2. **Skill Type** is defined generally as the type of work performed. Ten broad occupational categories, based on skill type, are identified in the NOC:

0. Management Occupations
   - legislators, senior management, and middle and other management occupations
1. Business, Finance, and Administration
   - supervising and providing financial and business services, administrative and regulatory services, and clerical support services
2. Natural and Applied Sciences and Related Occupations
   - professional and technical occupations in the sciences, including physical and life sciences, engineering, and architecture
3. Health Occupations
   - occupations providing health care support to patients and occupations providing support to professional and technical staff
4. Occupations in Social Science, Education, Government Service, and Religion
   - occupations concerned with law, teaching, counselling, conducting social science research, developing government policy and administering government and other programs
5. Occupations in Art, Culture, Recreation, and Sport
   - professional and technical occupations related to art and culture (performing arts, broadcasting, writing, museums, etc.) and occupations in recreation and sport
6. Sales and Service Occupations
   - sales occupations, personal and protective services, and occupations related to hospitality and tourism
7. Trades, Transport, and Equipment Operators and Related Occupations
   - includes construction and mechanical trades, trades supervisors and contractors, and operators of transportation and heavy equipment
8. Occupations Unique to Primary Industry
   - non-technical occupations in mining, oil and gas production, forestry and logging, agriculture, horticulture, and fishing
9. Occupations Unique to Processing, Manufacturing, and Utilities
   - supervisory and production occupations in manufacturing, processing, and utilities

Appendix C

Occupation Skill Types
Students from Lower Level Programs

Before or While Studying	Percent	After Studying	Percent
Sales & Services	49%	Sales & Services	39%
Business, Finance, & Administration	16%	Business, Finance, & Administration	18%
Social Sciences, Education, Government, & Religion	7%	Social Sciences, Education, Government, & Religion	15%
Art, Culture, Recreation, & Sport	6%	Natural & Applied Sciences	6%
Trades, Transport, & Equipment Operators	6%	Trades, Transport, & Equipment Operators	5%
Management Occupations	6%	Management Occupations	5%
Health Occupations	3%	Art, Culture, Recreation, & Sport	5%
Natural & Applied Sciences	3%	Primary Industry Occupations	4%
Processing, Manufacturing, & Utilities Occupations	3%	Processing, Manufacturing, & Utilities Occupations	3%
Primary Industry Occupations	2%	Health Occupations	2%

Occupation Skill Types
Students from Upper Level Programs

Before or While Studying	Percent	After Studying	Percent
Sales & Services	38%	Social Sciences, Education, Government, & Religion	26%
Social Sciences, Education, Government, & Religion	19%	Sales & Services	22%
Business, Finance, & Administration	17%	Business, Finance, & Administration	18%
Natural & Applied Sciences	6%	Natural & Applied Sciences	8%
Trades, Transport, & Equipment Operators	6%	Management Occupations	7%
Art, Culture, Recreation, & Sport	5%	Art, Culture, Recreation, & Sport	6%
Primary Industry Occupations	5%	Health Occupations	4%
Management Occupations	4%	Trades, Transport, & Equipment Operators	3%
Health Occupations	1%	Processing, Manufacturing, & Utilities Occupations	3%
Processing, Manufacturing, & Utilities Occupations	0%	Primary Industry Occupations	2%